



# Battery Park City Ballfields & Community Center Resilience Project

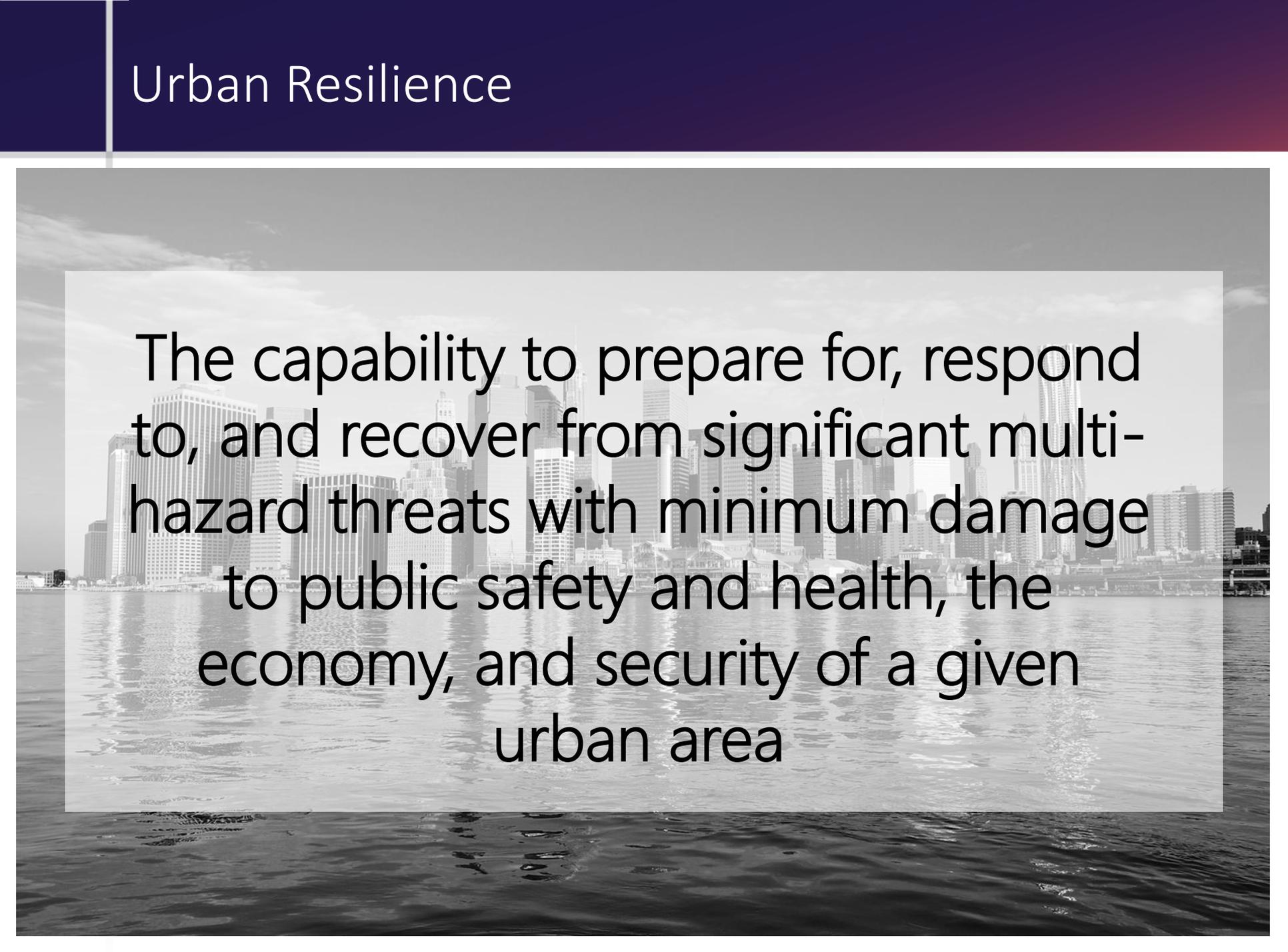
Public Meeting  
Presentation  
November 19, 2018



Battery Park  
City Authority



# Urban Resilience



The capability to prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to public safety and health, the economy, and security of a given urban area

# About STV

- Full-service A/E, Environmental & CM firm
- Serving New York since 1912
- Employee-Owned
- 1,800 staff in 40+ offices nationwide
  - Nearly 1,000 professionals in the greater New York region
- Over 70 storm resiliency projects with 23 clients since Sandy (\$1.5B construction value)



# Collaborative Team



**SiteWorks**  
Landscape  
Architecture



**Yu & Associates**  
Geotechnical  
Engineering

**STV Incorporated**  
Prime Consultant



Project Management  
Infrastructure &  
Resilience  
Engineering

**Invictus  
Engineering**  
Estimating and  
Scheduling

**InGroup Inc.**  
Community  
Outreach

**Naik Consulting  
Group**  
Topographic &  
Utility Surveys



# STV - Extensive High-profile NYC Experience



**WTC TRANSPORTATION HUB**



**GOVERNORS ISLAND REDEVELOPMENT**



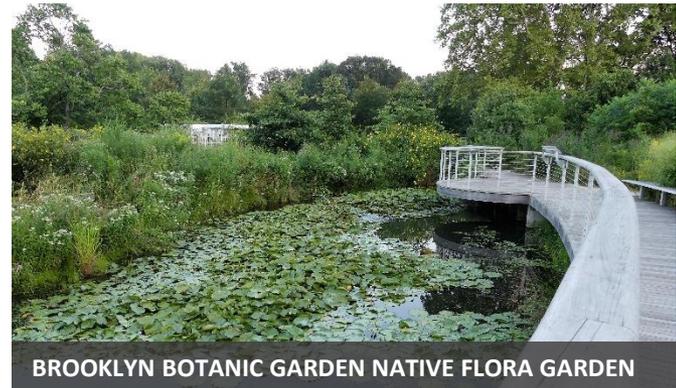
**ROUTE 9A & LOWER MANHATTAN STREETS RECONSTRUCTION**



**WTC SITE REDEVELOPMENT PROGRAM MANAGEMENT**

# SiteWorks – Sustainable Landscape Solutions

- Passion for creating durable outdoor urban environments through careful engagement of design, technology, science & building craft
- Envision comprehensive solutions that maximize a site's social, ecological & aesthetic potential



# Background

# Climate Change

## Temperature Anomaly (°C)

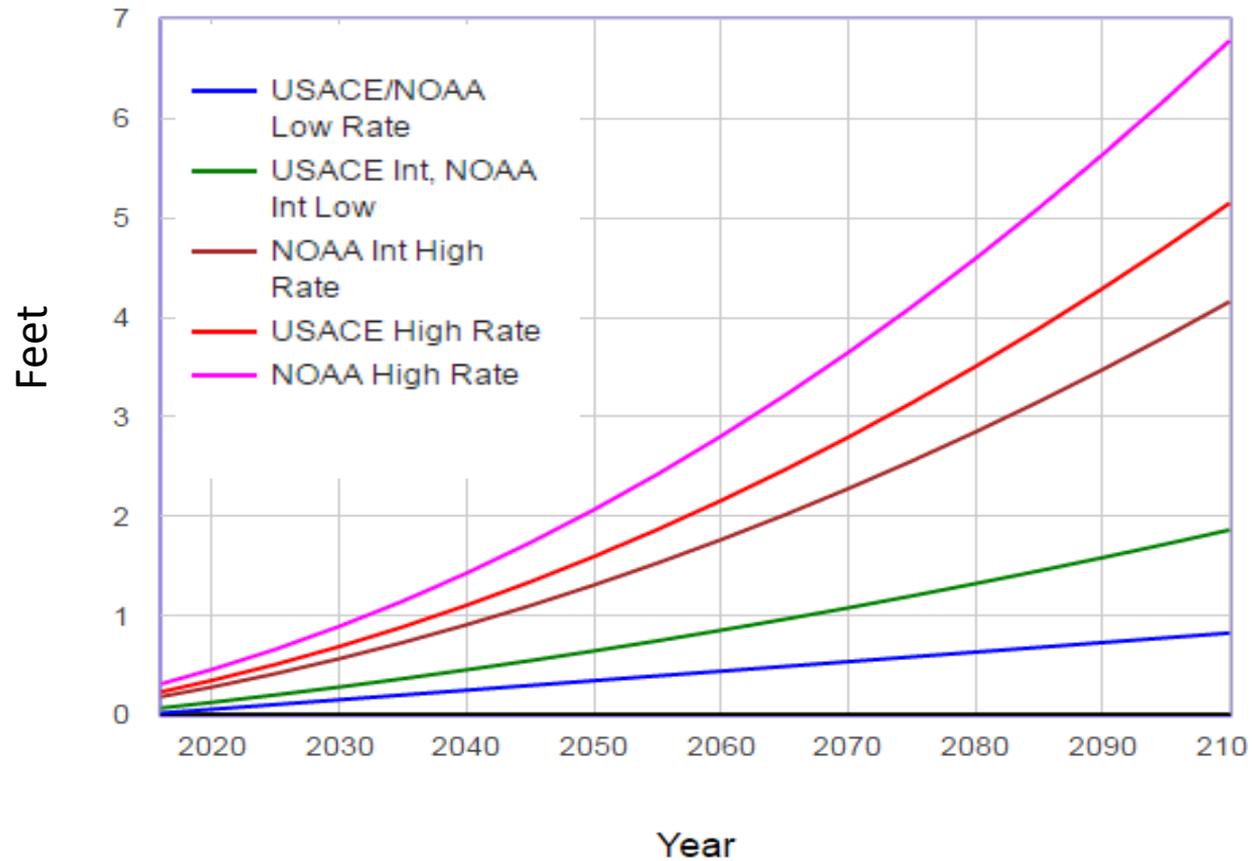
(Difference from 1980-2015 annual mean)

Record Years

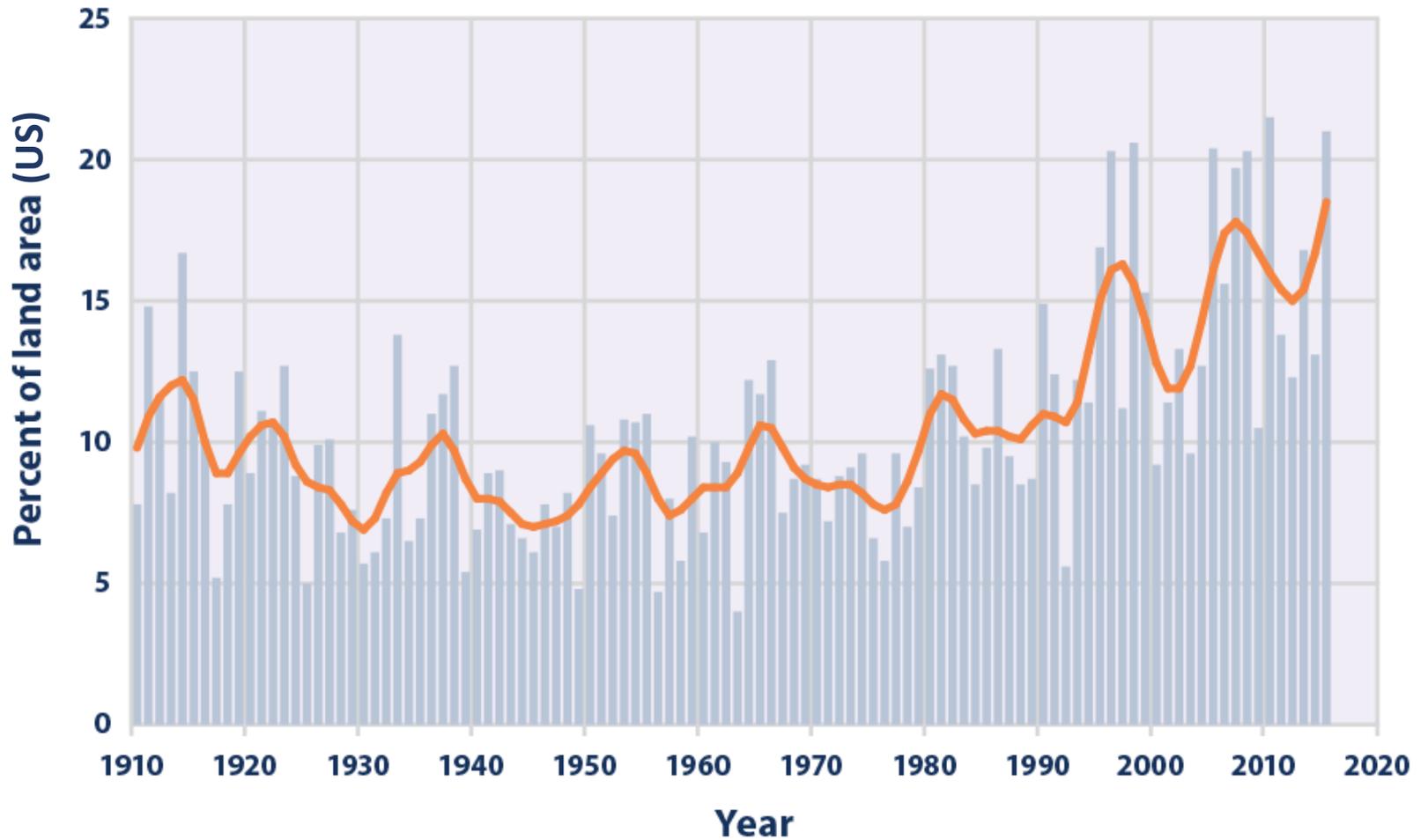


# Sea Level Projections

Relative Sea Level Change Projections - Gauge: 8518750, The Battery, NY (05/01/2014)

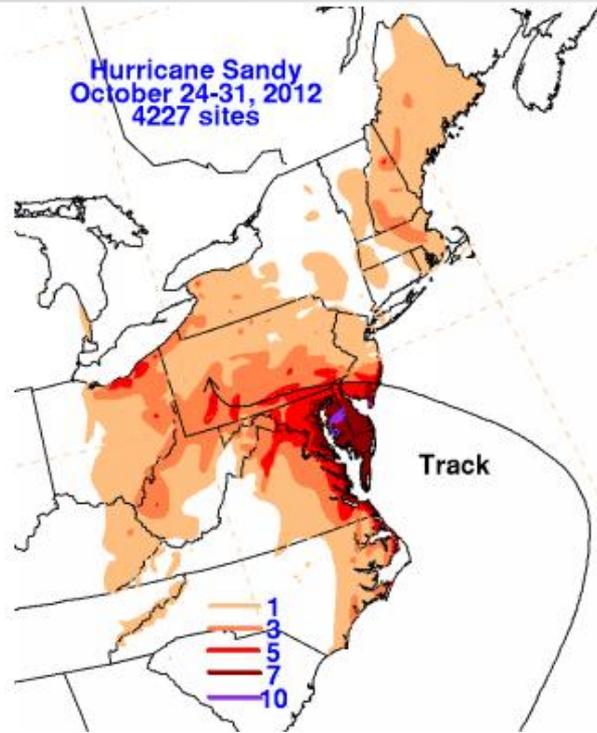


# Heavy Rainfall

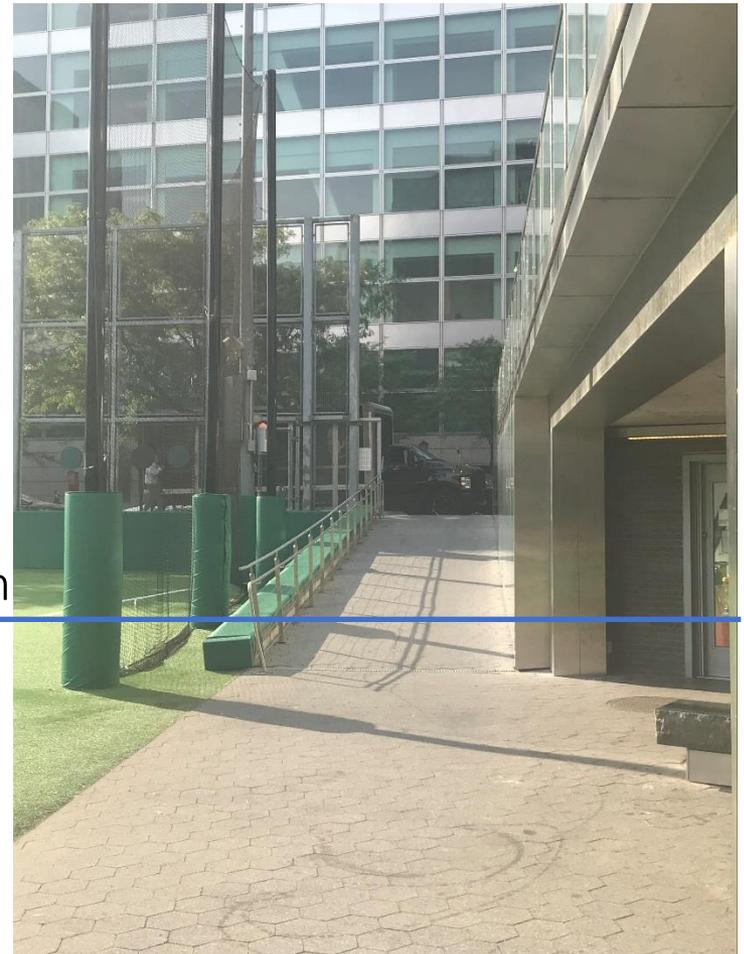




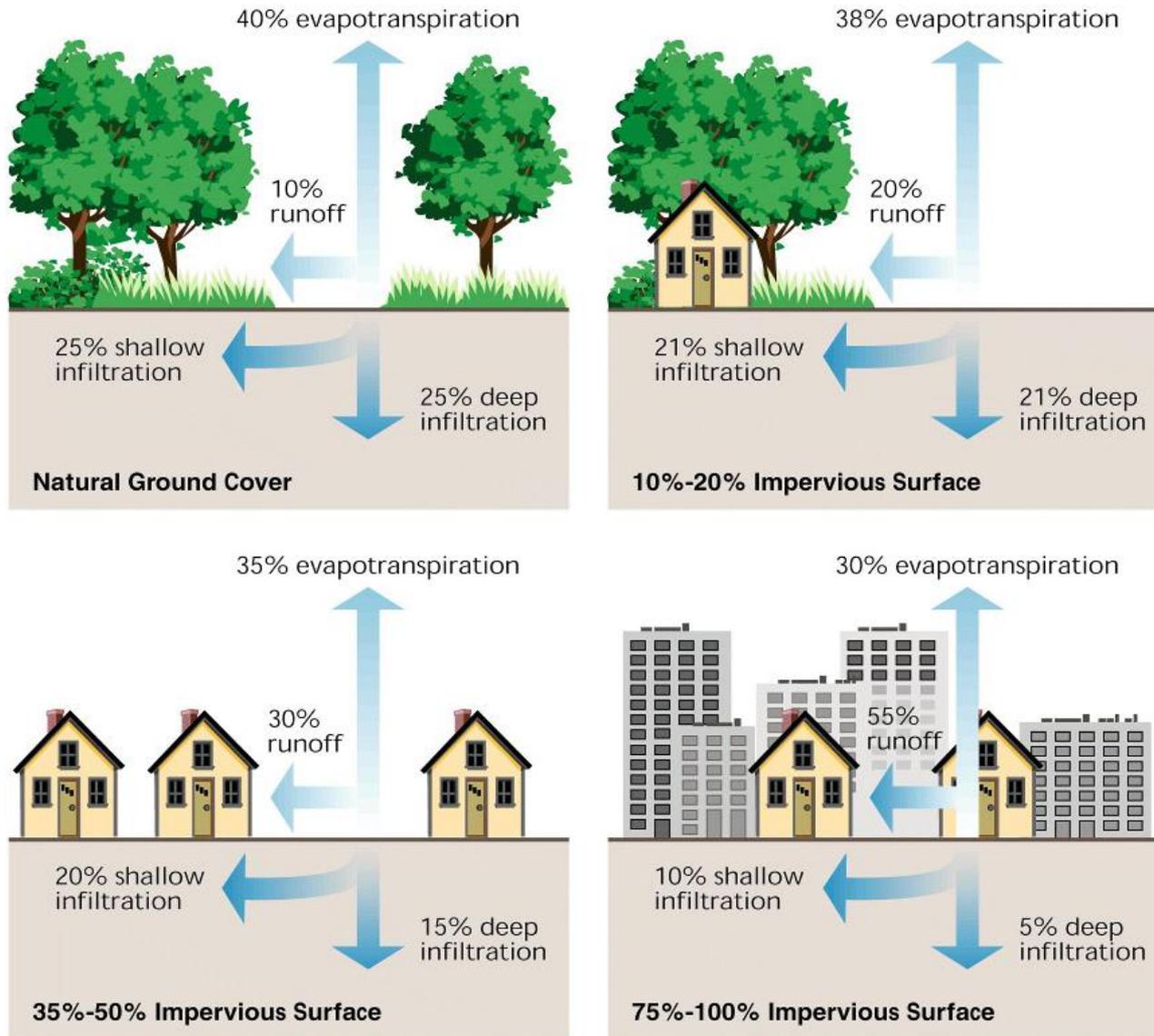
# Hurricane Sandy



Storm Surge Inundation Elevation



# Urban Development



Source: Adapted from Arnolds and Gibbons

**Community**

+

**Open Space**

+

**Resilience**

# Project Goal



*Integrate systems seamlessly with architecture and functional requirements to ensure the safety and purpose of the open and building spaces.*

# Integrated Approach



# Integrated Approach – Subsurface



# Integrated Approach - Geometries



# Integrated Approach – Accessibility



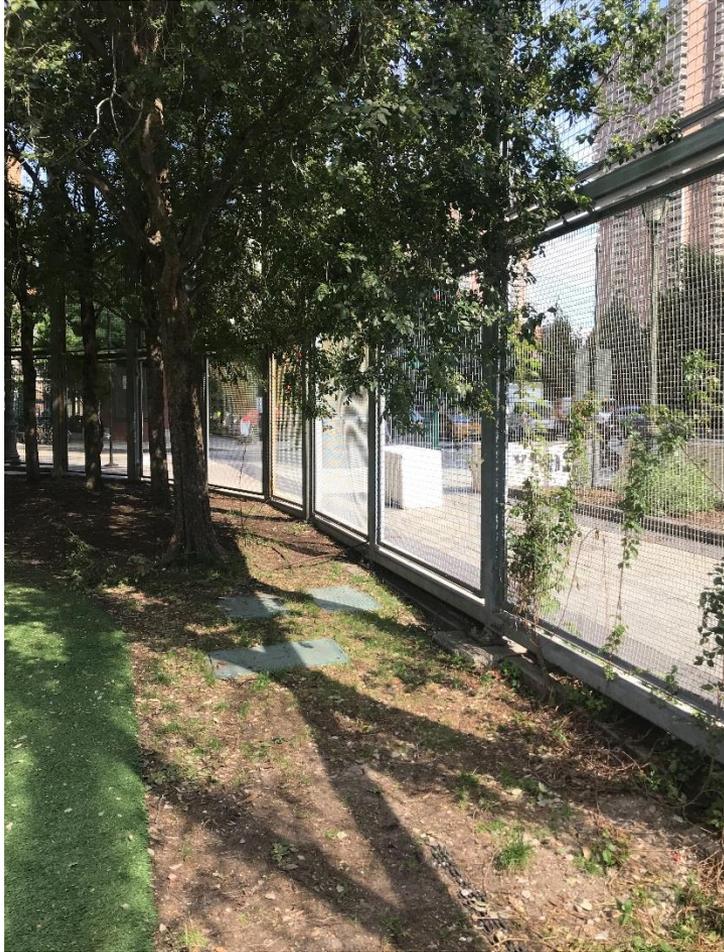
# Integrated Approach – Open Space



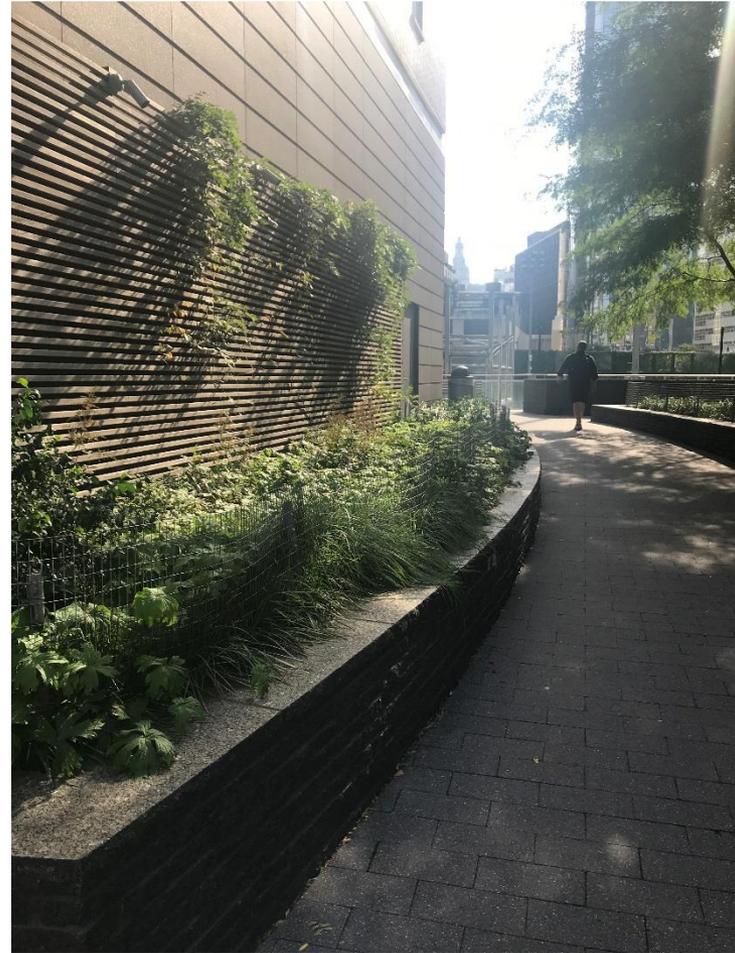
# Integrated Approach – Visibility



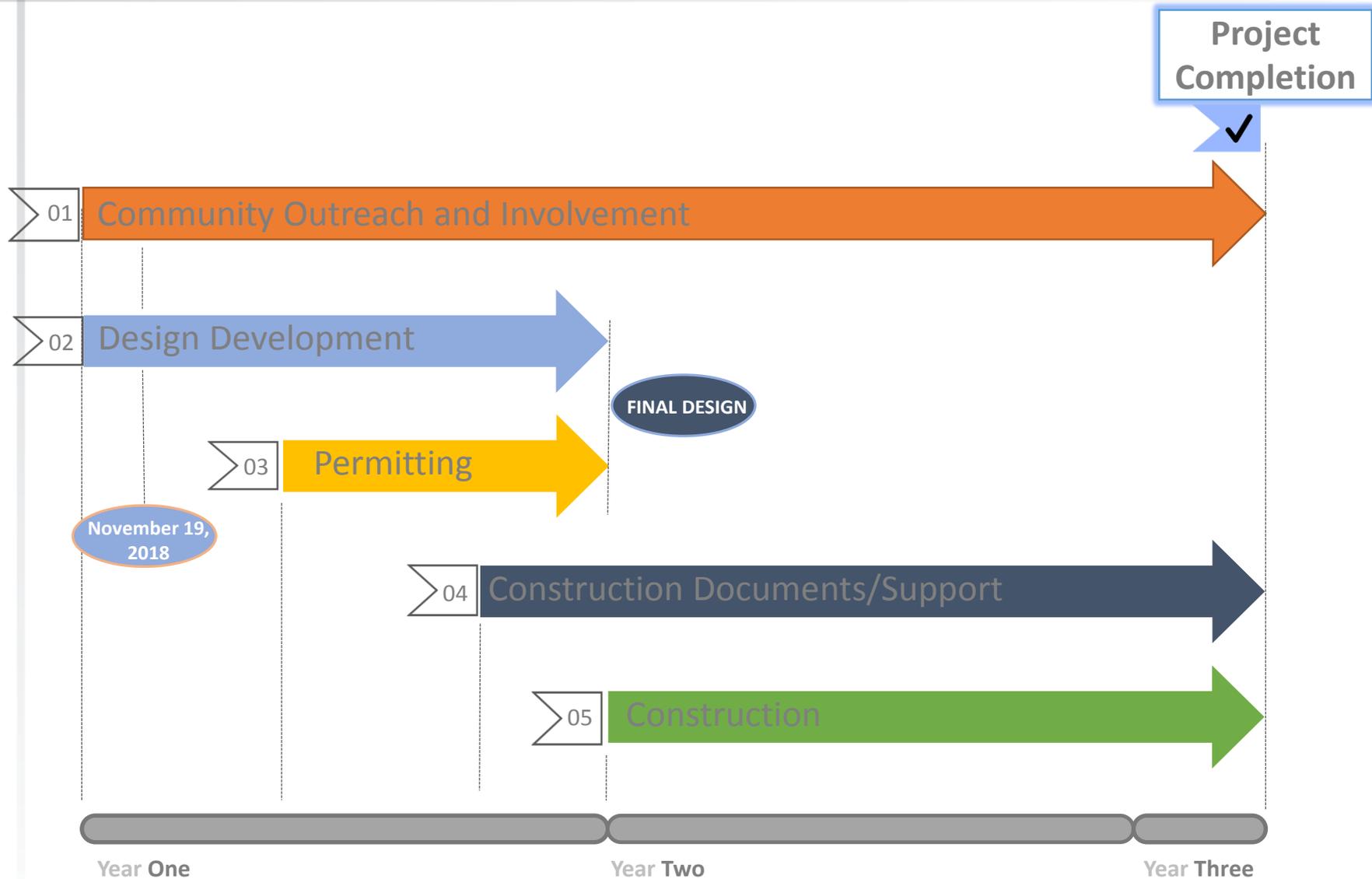
# Integrated Approach – Softscape

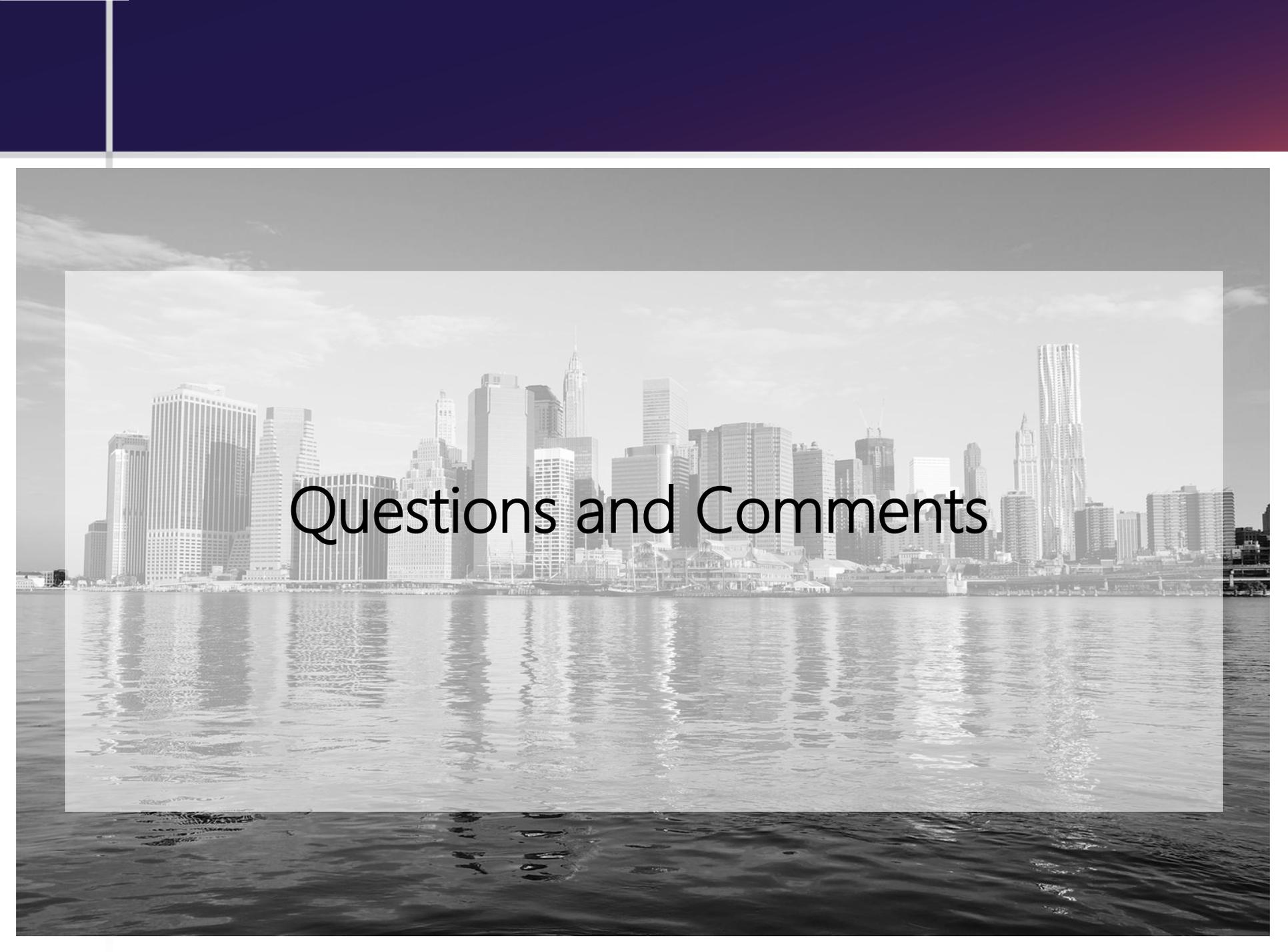


# Integrated Approach – Hardscape



# Project Schedule



A black and white photograph of a city skyline, likely New York City, viewed from across a body of water. The skyline features numerous skyscrapers of varying heights and architectural styles. The water in the foreground is dark and shows ripples and reflections of the buildings. The sky is overcast with soft, diffused light. The text "Questions and Comments" is overlaid in a large, black, sans-serif font in the center of the image.

# Questions and Comments